

Please type a plus sign (+) inside this box →

Approved for use through 09/30/2000. OMB 0651-0032  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

*(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))*

Attorney Docket No.	04555/0100	30,211
---------------------	------------	--------

<i>First Inventor or Application Identifier</i>	Lesser
-------------------------------------------------	--------

<i>Title</i>	SEMI-AUTOMATED LINKING AND HOSTING METHOD
--------------	-------------------------------------------

**Express Mail Label No.** EK088462098US

## APPLICATION ELEMENTS

*See MPEP chapter 600 concerning utility patent application contents.*

**ADDRESS TO:**

Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

1. ☒ \* Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☒ Specification [Total Pages 18]  
(preferred arrangement set forth below)
- Descriptive title of the Invention
  - Cross References to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to Microfiche Appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
3. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 8]
4. Oath or Declaration [Total Pages 2]
- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 C.F.R. § 1.63(d))  
(for continuation/divisional with Box 16 completed)
- i. ☐ DELETION OF INVENTOR(S)  
Signed statement attached deleting  
inventor(s) named in the prior application,  
see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).

5. ☐ Microfiche Computer Program (*Appendix*)
6. Nucleotide and/or Amino Acid Sequence Submission  
(*if applicable, all necessary*)
- a. ☐ Computer Readable Copy
- b. ☐ Paper Copy (identical to computer copy)
- c. ☐ Statement verifying identity of above copies

### ACCOMPANYING APPLICATION PARTS

7. ☐ Assignment Papers (cover sheet & document(s))
8. ☐ 37 C.F.R. § 3.73(b) Statement ☐ Power of Attorney  
(when there is an assignee)
9. ☐ English Translation Document (if applicable)
10. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
11. ☐ Preliminary Amendment
12. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
- \* Small Entity
13. ☒ Statement(s) ☐ Statement filed in prior application, Status still proper and desired  
(PTO/SB/09-12)
14. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
15. ☐ Other: .....

\* NOTE FOR ITEMS 1 & 13: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).

16. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment:
- |                                       |                                     |                                                     |                                |
|---------------------------------------|-------------------------------------|-----------------------------------------------------|--------------------------------|
| <input type="checkbox"/> Continuation | <input type="checkbox"/> Divisional | <input type="checkbox"/> Continuation-in-part (CIP) | of prior application No. _____ |
|---------------------------------------|-------------------------------------|-----------------------------------------------------|--------------------------------|

Prior application information: Examiner \_\_\_\_\_ Group / Art Unit: \_\_\_\_\_  
For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 4b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**17. CORRESPONDENCE ADDRESS**

- ☐ *Customer Number or Bar Code Label* (Insert Customer No. or Attach bar code label here) or ☒ *Correspondence address below*

Name	Alan Ruderman				
	Miller & Martin LLP				
Address	Suite 1000 Volunteer Building				
	832 Georgia Avenue				
City	Chattanooga	State	Tennessee	Zip Code	37402-2289
Country	USA	Telephone	(423) 756-6600	Fax	(423) 785-8480

Name (Print/Type)	Alan Ruderman	Registration No. (Attorney/Agent)	25,369
Signature		Date	6/98, 2000

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**STATEMENT CLAIMING SMALL ENTITY STATUS  
(37 CFR 1.9(f) & 1.27(c))--SMALL BUSINESS CONCERN**Docket Number (Optional)  
0455/0100 30,211Applicant, Patentee, or Identifier: Joel LesserApplication or Patent No.: N/AFiled or Issued: HerewithTitle: Semi-Automated Linking and Hosting Method

I hereby state that I am

- ☐ the owner of the small business concern identified below.  
☒ an official of the small business concern empowered to act on behalf of the concern identified below.

NAME OF SMALL BUSINESS CONCERN Creative NetVentures, Inc.ADDRESS OF SMALL BUSINESS CONCERN 270 Westbury Lane  
Atlanta, Georgia 30005-2518

I hereby state that the above identified small business concern qualifies as a small business concern as defined in 13 CFR Part 121 for purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time, or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby state that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention described in:

- ☒ the specification filed herewith with title as listed above.  
☐ the application identified above.  
☐ the patent identified above.

If the rights held by the above identified small business concern are not exclusive, each individual, concern, or organization having rights in the invention must file separate statements as to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern, or organization having any rights in the invention is listed below:

- ☒ no such person, concern, or organization exists.  
☐ each such person, concern, or organization is listed below.

Separate statements are required from each named person, concern or organization having rights to the invention stating their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

NAME OF PERSON SIGNING Joel LesserTITLE OF PERSON IF OTHER THAN OWNER ChairmanADDRESS OF PERSON SIGNING 270 Westbury Lane, Atlanta, Georgia 30005-2518SIGNATURE DATE 6-27-00

[illegible]

JC815 U.S. PRO  
 09/605127  
  
 06/28/00

The enclosed items are:

Signed: Beverly L. Middleton

June 28, 2000  
Date

## SEMI-AUTOMATED LINKING AND HOSTING METHOD

### Field of the Invention

The present invention relates, in general, to the area of providing on-line Internet services. More specifically, this invention relates to a method for the semi-automated creation, maintenance, and management of links on subscriber websites utilizing a service website, upon which the invention resides.

## BACKGROUND OF THE INVENTION

### Glossary of Terms

Service Website: The website on which the invention resides and is accessible from.

Subscriber Website: A website whose owner has purchased a license to use the invention on the Service Website.

Subscriber Website Owner: The person contracting for the services provided by this invention, i. e. the Account Owner.

Subscriber Website Webmaster: The person who manages the Subscriber Website, and more specifically, would perform link maintenance and other technical support for the Subscriber Website. The Webmaster and Owner are sometimes the same person. Should the Webmaster be a different person, the Webmaster works for the Owner and takes direction from the Owner.

Webmaster: The person managing an other (i. e. non-subscriber) website on behalf of the Owner. When Webmaster is used in the text that follows, it is implied that the Webmaster is acting at the direction of the Owner.

HTML: Hypertext Markup Language is the code used to create a web page using an appropriate HTML Editor.

### Description of Related Art

The Internet is a collection of computers linked together throughout the world. Some of these computers act as clients for their users. Other computers act as servers, or hosts, for one or more websites. Each website has a unique Internet Protocol (IP) address and these addresses are related to website names conventionally known as Universal Resource Locators (URLs). The URLs on a website's page(s) "point" to another site and are referred to as "links".

The Owners or managers of websites (Webmasters) all share a common interest: increased user traffic to their websites. A common way this is promoted among Webmasters is their mutual agreement to include links to each other's

websites. Users will often utilize these links to navigate to other sites of interest, thus increasing traffic. Navigation is accomplished by the user operating a link by clicking his/her mouse on the link's web-page representation (i. e. the URL or some symbol, banner or icon representing the URL of the website). This process eliminates the need for the user to enter the URL by typing it into the web browser being used. By simplifying the navigation process, it's been discovered that users are more likely to visit more websites.

When two Webmasters agree to mutual links, these are often referred to as reciprocal links, because of their reciprocal agreement. Should one Webmaster remove a link to the other's website, the "offended" Webmaster needs to know the mutual agreement has been broken so that appropriate action can be taken. Checking for this situation manually is very time-consuming. Accordingly, a need exists to verify reciprocal links are still in place and operational.

In the typical linking process:

1. The Webmaster or Owner of Website B becomes interested in a reciprocal link with Website A.
2. Website B's Owner or Webmaster send an e-mail message to Website A's Webmaster (typically Webmaster@websiteA.com) identifying themselves (typically websiteB.com) and proposing a reciprocal link.
3. Website A's Owner or Webmaster visits Website B and determines his/her interest.
4. The Owners reach agreement and turn the technical task of implementing the links over to their respective Webmasters.
5. Typically, the Website A Webmaster fulfills his/her end of the agreement first by editing Website A's web page using an appropriate HTML editor and inserting the Website B's URL (converting the address text into a hyperlink) into the appropriate web page on Website A. This may be augmented by some symbol, banner, or icon (either physically-furnished or access-furnished) by Website B's Webmaster. If multiple links exist on a single page, it may be necessary to set the font of the link to correspond with other links on the page. Other

parameters concerning the link may also need to be adjusted at this time by the Website A Webmaster, possibly including positional placement on the web page or other attributes.

6. Website A Webmaster then notifies the Website B Webmaster (typically by e-mail) saying “we’ve posted our link to you; you post ours”. Of course, a variety of message types and/or wording could be utilized to convey the information in the message.
7. Website B Webmaster edits Website B’s web page following essentially the same procedure as outlined in 5 above.

U.S. Patent No. 5,995,099 (the ‘099 patent) describes a method of creating and maintaining page links between websites. This method has a link page (page A) as a portion of first Webmaster’s website. By outputting first link information at page A, second Webmaster may then provide second link information to establish the links server which processes the second link information and automatically modifies page A to include a link to the second Owner without any intervention from the first Owner. (Note: We revert back to the term “Owner” rather than “Webmaster” because it is the term used in the ‘099 patent. While this correctly references the ‘099 patent, the use of these terms should not be confused. The ‘099 is a tool for an Owner, which is distinguishable from a tool for the Webmaster, although it has already established that some Owners are also Webmasters).

The practice of automatically linking the web page of the first Webmaster to the web page of the second Webmaster, without any intervention from the first Webmaster, is not believed to always be in the best interest of the first Webmaster. For example, suppose the first site is owned by a politician of a large political party and maintains a website supporting his/her beliefs and political party. A second Owner has a website for another large political party, and perhaps, is a political opponent of the first Webmaster. Under the teachings of the ‘099 patent, the second Owner (or his Webmaster) could establish a link from the first Owner’s website. As another example, perhaps the first Owner is a pro-life activist that

maintains a website and the second Owner advocates pro-choice through a website. Obviously, the first Owner may not likely desire the second Owner (or his Webmaster) to establish a link from the first Owner's site to the second Owner's site.

Accordingly, a need exists for a method of semi-automatically establishing links, and even bi-directional (or reciprocal) links between two websites. Specifically, a need exists for creating web sites, which greatly simplifies the traditional method of creating web sites, but still provides for approval from the first site's Webmaster to allow the second site's Webmaster to make a link to the first web site.

The '099 patent also teaches a method of verifying that links still correspond to active sites and that a second link, located at a particular page of the second site is present.

Once a link is established from the first Owner's site to the second Owner's site, the '099 patent requires the first Owner to organize the links which are provided by second Owners to the first Owner. At least one website: [www.linkbank.com](http://www.linkbank.com) has been established by Keycrown Consultants Ltd. and Total Web Solutions Ltd. which allows a first Owner to group "related links" into a "hierarchal, annotated, searchable directory like Yahoo!(TM)" on a web page hosted by LinkBank(TM). For instance, if three links are established directing a user to three bookstore sites, an appropriate heading might be "Book Stores".

The LinkBank(TM) site also appears to be capable of performing "slideshows" or linking to a site for a period of time and then transferring the user to another site for a period of time in order to present a "slideshow" of websites. Furthermore, data may be obtained as to the date, title, and popularity of links in order to prioritize the links associated with a particular website. However, this site is presently not capable of establishing links, which, apparently must first occur in the traditional manner by the first site Webmaster manually establishing the link.

This process is time consuming. Accordingly, a need exists to provide an improved method for establishing and/or categorizing links.

Furthermore, although the LinkBank website allows for "slideshows" and for categorizing "like Yahoo! (TM)", other categorizing techniques defined by the site's Webmaster, are also desirable.

### **BRIEF SUMMARY OF THE INVENTION**

The present invention is a method of utilizing an ADMINISTRATOR to automatically format and set up links for acceptance by the Subscriber Website Webmaster to a second website at the request of that site's Webmaster. Upon acceptance of the link, the Subscriber Website Webmaster can classify the second site's web page under at least one classification heading on a link page, maintained by ADMINISTRATOR as the preferred option of the Subscribing Website Webmaster. Additionally, in the preferred mode of operation, the links on a particular page, list or category are rotated. Rotation is utilized to ensure that links located toward the end of alphabetized set of links, can periodically appear near the beginning of the set of links, thus ensuring an even distribution of exposure to the user. Automatic rotation, at the preference of the Subscribing Website Webmaster, is an object of the present invention. Another object of the invention is to provide auto-rotation, at the Webmaster's option, of some, none or all of the links, which have been established on a web site.

Furthermore, it is an object of the present invention to provide a semi-automated linking capability to improve ease with which one establishes links between websites.

Still a further object of the invention is to utilize the ADMINISTRATOR to perform at least some of the detail oriented tasks such as:

1. initially setting the font for the links,
2. organizing the links,
3. rotating the links at the discretion of the Subscribing Webmaster.

The first website's Webmaster Owner may have access to change the work of the ADMINISTRATOR but the tasks performed by the ADMINISTRATOR decrease the work required to be performed by the first website's Webmaster.



## BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

The particular features and advantages of the invention as well as other objects will become apparent from the following description taken in connection with the accompanying drawings in which:

Fig. 1 is a schematic diagram of representative physical implementations in accordance with the present invention;

Figs. 2A and 2B represent a flow chart illustrating the creation of a link embodiment utilized with Fig. 1;

Fig. 3 is a schematic diagram of a queue utilized in the embodiment depicted in Fig. 1;

Fig. 4 is a flow chart illustrating the link rotation embodiment utilized with Fig. 1;

Figs. 5A and 5B represent a flow chart illustrating the link verification embodiment utilized with Fig. 1; and

Fig. 6 is a flow chart illustrating the link modification embodiment utilized with Fig. 1.

## DETAILED DESCRIPTION OF THE INVENTION

Figs. 1 and 3 are graphical representations and Figs. 2a, 2b, 4, 5a, 5b, and 6 are flow charts illustrating a preferred embodiments of several aspects of the invention. The method preferably includes three participants: an Administrator 10, an Account Owner 12, and a Webmaster 14. The administrator 10 is loosely defined as the system or entity, which maintains at least one link page 16, 18, 19 for the account Owner 12. The administrator 10 could be a portion of an account Owner's website, or more preferably a location at a separate server of the administrator 10 which is linked to account Owner's website. Although administrator 10, account Owner 12 and Webmaster 14 often refer to as systems herein, these terms may also refer to the individuals who run the systems as well. The method may be utilized on the Internet, the World Wide Web, Intranets, or any other grouping of linked computers.

Referring to Figs. 1, 2a and 2b, the process begins at step 20 in Fig. 2a when a Webmaster 14 learns of a link page 16 controlled by account Owner 12. If Webmaster 14 desires to establish a link, such as first link 52, from account Owner's link page 16, preferably he/she will solicit the administrator 10, the person, program and/or system, for a link from the

account Owner's link page 16 to the Webmaster's site 22 at step 22. This solicitation, or request, may be performed by activating button 24, such as an add-link button, on the link page 16, or through other known methods.

When the button 24, or other link, is activated, if utilized, a link request page 26 is preferably displayed to the Webmaster 14. The link request page 26 solicits the Webmaster 14 for information including the first link information 30 at step 28. It is preferred that the first link information 30 includes the URL address 34 of the Webmaster's site 22. Other information, including the Webmaster's site name 32, a site description 36 or other classification category of the Webmaster's website 22, the Webmaster's name 38, the Webmaster's e-mail address 40, and a password 42 for use with the administrator 10 may be requested at this time as well, or at a later time. Of course additional information could also be solicited at step 28, in one or more link request page(s) 26. Furthermore, all of the information listed above need not be obtained for the method to work according to the present invention. Nevertheless, at least the Webmaster's URL address 34 should be provided unless it may be obtained through other procedures.

At step 44 the Webmaster 14 inputs the first link information 30 and any other information solicited by the link request page 26 at step 28. When the Webmaster 14 has submitted the required information to the administrator 10, the administrator 10 creates a database entry 46 in a database 48, which is maintained by the administrator 10 at step 50. The database 48 may store database entries 46 from a plurality of account Owners 12. Furthermore, the database 48 may store a plurality of database entries 46 for any given account Owner 12. The use of the database 48 has been found to be useful in at least some program functions of the complete system of the preferred embodiment including the ability to check to determine whether any particular link is still linked to an active resource as discussed below.

After creating the database entry 46, the administrator 10 preferably notifies the account Owner 12 of the Webmaster's desire to create a first link 52 from the account Owner's link page 16 to the Webmaster's site 22 as illustrated in the form of a step in flow chart in Fig. 2a at step 54 and graphically in Fig. 1. The queue 56 preferably includes a display 65 which provides at least some of the information provided to the administrator 10 by the Webmaster 14 including the first link

information 30 at step 64. Additionally, the queue 56 preferably includes a queue link 62 to provide access to the account Owner 12 to the Webmaster's site 22. Accept and decline buttons 58, 60 are also included for use by the account Owner 12.

Referring back to Figs. 1 and 2a, if the Webmaster's site 22 is visited at step 66, the account owner 12 may then accept or delete one or more links in the queue 56. If any of the proposed links 56 are accepted at step 70, then the administrator 10 adds the first link 52 to the account Owner's link page 18 at step 80 as illustrated in Fig. 2B. Alternatively, the account Owner 12 may approve the link in the queue 56 at step 70. If the account Owner does not approve the link in the queue 56, the administrator 10 may ask the Webmaster 12 if the link at step 71. If deleted, the link is deleted at step 78. If the Webmaster 12 elects to store the link in the queue 56, step 73 directs to 75 where the queue 56 may be displayed again at a later time.

The administrator 10 preferably matches the font of the first link 52 with the fonts used in other first links 72, 74 on the account Owner's link page(s) 16, 18. Furthermore, the administrator 10 preferably locates the appropriate position(s) to place the first link 52 relative to other first links 72, 73. Specifically, in the preferred embodiment, at least one site description 36, such as category one 74 or category two 76 are requested during step 28. The administrator 10 may utilize this site description 36, category profile, or other information to categorize the first link 52 relative to the other first links 74, 76. In addition to an alphabetic ordering scheme, separate category ones and twos 74, 76 may also be utilized. Furthermore, only one grouping method could be utilized under many circumstances.

The Webmaster 12 may desire for there to be more than one first link 52 created on account Owner's link page 18 as illustrated in Fig. 1, particularly if Webmaster 14 believes Webmaster's website 22 may be appropriately categorized under two or more headings. The multiple locations of first link 52 may occur in one or both of category one 74 and category two 76.

Within a particular category, such as category one 74 or category two 76, the first links 52,72, 74 may be alphabetized or otherwise ordered. In the presently preferred embodiment, the account Owner 12 will be presented with the option of autorotation of links, which will be discussed in more detail below.

After the account Owner 12 decides to accept a link proposal in a queue 56, or approve the link 70, a message may be sent to the Webmaster 14, such as at step 82. This message may inform the Webmaster 14 of the creation of the first link 52. Additionally, the message may request a second link 90 from Webmaster 14 to account Owner 12. At step 84, the link creation process of the preferred embodiment is complete.

With at least two first links 52,72,73 created and displayed on an account Owner's link page 18, the administrator 10 may provide the account Owner 12 the opportunity to autorotate first links 52,72,73. Autorotation as defined herein means, "the reordering at a particular time of a set of links arranged in a first order to a second order which is different than the first order." In the preferred embodiment, the reordering process includes rotating the first links 52,72,73 in accordance with a formula. For the links displayed in Fig. 1 in column one 74, one example could be visualized as follows: suppose first links 52,72 begin with the letter "A" and first link 73 begins with the letter "B". The formula could be to place all listings beginning with "B" before any listing with "A", such as by taking the "A" listings and providing them at the end of the listing of links.

If this example were utilized, the resulting display would be the order as displayed in column two 76. In this manner, the next order would place all of the "C" listings at the top and so on. The formula could be any suitable formula or algorithm, which switches the order of the links.

The autorotation feature has been found helpful in displaying links at different locations in a listing so that the links may vary in exposure. Specifically if a person generally views a few links in a particular category, then it is unlikely that this particular person may ever view links at the end of a category. However, if the links are autorotated, links, which may have previously been at the end of a list, may be moved to where some may be present near the beginning, depending upon the

particular formula utilized. Furthermore, after several successive autorotations, it is more likely that some of the links which began closer to the bottom of a particular listing will move closer towards the top of a particular listing.

A flow chart of the autorotation feature is provided in Fig. 4. The process begins at step **86**. The administrator **10** preferably solicits the account Owner **12** to determine whether or not the account Owner desires to autorotate the first links **52** at step **88**. If the account Owner **12** does not desire to autorotate the links, then the procedure ends at step **90**. Otherwise, if the account owner desires autorotation, then the administrator **10** re-orders links according to a routine, or formula, at step **92**. The process is preferably repeated at step **96**. Specified times may be according to an interval such as weekly, daily or other regular interval. Specified times may also be generated randomly by the administrator **10** or other entity.

Another useful feature of a link maintenance system is the ability to check for i.e., links which do not correspond to a hosted website, and reciprocal links. The method of the presently preferred embodiment is illustrated in flow chart form in Figs. 5a and 5b. The process begins at step **92**. The administrator **10** preferably solicits a account Owner **12** whether the feature of checking for dead first links **52**, **72**, **73** is desired at step **96**. If the Webmaster does not desire to check for dead links, a variable A may be set to zero at step **98**. If the Webmaster **12** desires to check for dead links, the variable A may be set to one at step **100**.

In addition to dead link checking, the maintenance of the links may also involve checking for reciprocal links. At step **102**, the Webmaster **12** may indicate a preference for reciprocal link checking. If reciprocal link checking is desired by the Webmaster **12** then second variable B may be set to one at step **106**. If the Webmaster **12** does not desire to check for reciprocal links, then the variable B may be set to zero at step **104**. The administrator **10** then has the necessary information for any given Webmaster **12** as to what kind of checks should be performed for that particular Webmaster **12**. These variables may be stored in a database, such as database **48** in Fig. 1 and may be changeable by the account Owner **12** and/or administrator **10**.

Continuing along in Fig. 5a, for any given account Owner **12**, the process of checking may begin. If both A and B equals zero at step **108**, then the process may be repeated at step **110** for the next account Owner **12**. When the account Owners **12** are exhausted, then the process may end. Supposing that at least one account Owner **12** desires some type of link to be checked, then the loop will be broken and the process will proceed to step **112**.

At step **112**, the administrator looks at a particular Webmaster's database entry **46** of first links **52,72,73** the administrator **10** then accesses a given link number, such as the first link **52** to determine if it corresponds with an existing resource, namely, a Webmaster's website such as website **22**. The administrator **10** then determines if the site exists at step **119**. This process preferably includes outputting the URL address **34** of the Webmaster **14** from the database and accessing through a connection **22**. Of course, other methods could be utilized. If the site does not exist, or is otherwise a dead links, then the administrator **10** sends a message to the account Owner **12** at step **121**. It is possible that after one or more successive checks of finding no site **22** present, then a separate routine may be utilized to remove the first link **52**.

Next, the flow chart continues from step **117** to step **115** in Fig. 5b to continue the flow chart at step **120**.

Continuing on in Fig. 5B, if dead link checking is not desired at step **120**, then the administrator **10** determines if all the first links have been checked at step **122**. If all the checks have not been checked, then the next link to be checked will be accessed from the Webmaster's database **48** at the administrator **12** at step **118** and the process will continue as shown through step **123** linking to step **125** in fig. 5A. If all first links **52** have been checked at step **122**, then the next account Owner's database **48** or database entry **46** may be accessed at step **124** which may deliver the administrator **10** at step **126** to step **94** or **95** depending on whether the next account Owner **12** has indicated a preference for link checking. Of course, default entries could be utilized for preferences.

If the account Owner **12** has requested reciprocal link checking at step **102**, then the administrator **10**, preferably while at the Webmaster's URL address **34** from step **119** above, spiders, preferably by downloading pages until the link is

found, and more preferably remembering where it found the link the last time, to begin at that location again, through the Webmaster's site 22 at step 130.

As the spider is accessing the Webmaster's site 22 at the URL address 34 (step 130), the spider "looks" to see if the This webmaster's site 164 has been linked to somewhere by another site 22 by a second link 90. If the site 164 has been linked to, then the administrator 10 checks to see if all the links for this particular account Owner 12 has been checked in step 136. If all the links have been checked (at step 137), then the flow chart directs to step 148 which will direct the administrator 12 back to step 94 or 95 as discussed above. If all the links have not been checked at step 137 for the particular first Webmaster 12, then step 150 directs the administrator 12 back to step 114 of Fig. 5A to continue with the next link.

If the link to the Webmaster's site is not present at step 136, then a message is preferably sent to the account Owner 12 at step 138. At step 140, the administrator 10 looks to see if all the links have been checked. If all links have been checked for this particular account Owner 12, then step 142 directs the administrator 10 back to step 94, 95. If all links have not been checked, then the step 144 directs the administrator 10 back to step 114 to continue the process through the links as indicated.

Second links are displayed as second link 90 and second link 152 in Fig. 1. In the preferred embodiment the link page 16 is linked by link page link 162 to the account Owner's site 164. After seeing the advantages of the system as described herein, it is hoped that Webmasters such as Webmaster 14 will then subscribe to the administrator's service. Accordingly, a link page link 160 may be established to a Webmaster's link page 154 and the second link 152 may direct an user to the account Owner's site 164. It is believed that the more Webmasters 14 which visit link pages 16 of account Owners 12, the more Webmasters 14 will become account Owners 12.

Fig. 6 is illustrated as a preferred embodiment of a routine for the second Webmaster to modify the first link 52, 72, 74. This process begins at step 170. At step 172, Webmaster desires to modify a link, such as its first link 52 to the Webmaster's site 22. The Webmaster solicits the administrator at step 173 to request to modify the first link 52 to the

Webmaster's site 22. At step 174, the administrator 10 verifies the identity of the Webmaster 14 such as by verifying the URL address 34, 42 password of the Webmaster 14, e-mail address 40 of the Webmaster 14, or otherwise verifying the Webmaster's identity. At step 176, the Webmaster submits the proposed modification. The administrator 10 accepts the modification and preferably at step 178 similar to the approve queue similar to the queue 56 generated in the link creation process illustrated in Fig. 3.

Continuing with Fig. 6, the administrator 10 requests the first Webmaster 12 to approve the modification of step 180. If the administrator 10 does not approve a modification at step 180, the administrator 10 may provide the first Webmaster 12 with an opportunity to store the request at step 182. If the first Webmaster 12 elects to store the link at at step 181, the modify queue will be displayed to the first Webmaster at a later time as illustrated through the chart at step 185. If the link is not stored , it may be deleted at step 183. If the first Webmaster 12 elects to approve the modification by the Webmaster 14 at step 180, the administrator adopts the modification at step 184 and the process ends at step 186. The modified first link will then appear on the Webmaster's link page 16.

While preferred embodiments of the invention have been described above, it is to be understood that any and all equivalent realizations of the present invention are included within the scope and spirit thereof. Numerous alterations of the embodiments herein disclosed will suggest themselves to those skilled in the art. However, it is to be understood that the present disclosure relates to the preferred embodiments of the invention, which is for purposes of illustration only, and should not be construed as a limitation of the invention. All such modifications, which do not depart from the spirit of the invention, are intended to be included within the scope of the appended claims.



## CLAIMS

I claim:

1. A method of verifying a first link between an account Owner's link page and a Webmaster's site and a second link from the Webmaster's site to the account Owner's site using a database including first link information having a link address for a location at the Webmaster's site, the database maintained by an administrator, the method comprising:
  - (a) retrieving first link information from the database;
  - (b) determining whether the first link information corresponds to an existing resource at the Webmaster's site by accessing the Webmaster's site using the first link information;
  - (c) spidering through the Webmaster's site beginning at the link address; and
  - (d) verifying that second link information is present at the Webmaster's site.
2. The method of claim 1 further comprising the step of providing a message to the first Webmaster if the second link is not present at the Webmaster's site.
3. The method claim 1 further comprising controlling the link pages at the account Owner's site by said administrator.
4. The method of claim 1 further comprising hosting the administrator on a separate server than the account Owner.
5. A method of establishing a link between a link page of an account Owner and a site controlled by a Webmaster using an administrator, the method comprising:
  - (a) soliciting first link information by said administrator from said Webmaster, said first link information comprising at least an address for a location at the Webmaster's site;
  - (b) formulating a queue by said administrator containing at least some of said first link information;

- (c) presenting said queue to the account Owner for approval;
- (d) creating a first link by said administrator on said account Owner's link page to provide access to said Webmaster's site upon approval of a said first link in said queue.

6. The method of claim 5 further comprising receiving an e-mail address for the Webmaster.
7. The method of claim 5 further comprising receive a category from the Webmaster and said administrator utilizing said category to locate said first link on said account Owner's link page.
8. The method of claim 5 further comprising providing the account Owner the opportunity to store at least some of said first link information in said queue.
9. The method of claim 5 further comprising providing the address for the Webmaster's site as a URL address.
10. The method of claim 5 further comprising representing the queue as html.
11. A method of hosting links at a link page comprising:
  - (a) displaying a plurality of links in a first order;
  - (b) utilizing a formula, creating a second order for said links, said second order being different than said first order; and
  - (c) displaying the plurality of said links in a second order.

12. The method of claim 11 further comprising providing the formula in an alphabetical construction.

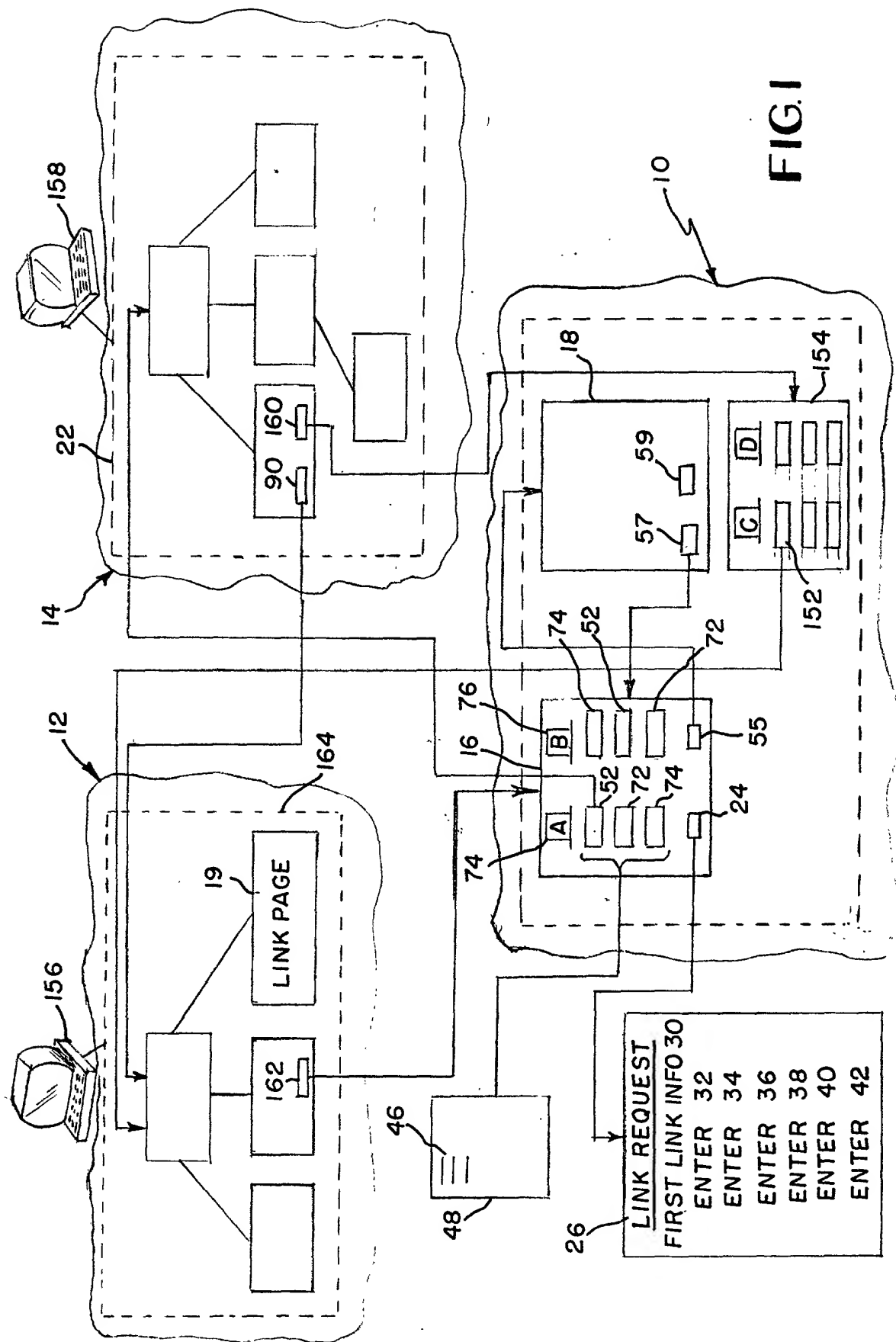
13. The method of claim 12 wherein the step of creating the second order of links further comprises assigning a particular letter a number, performing a mathematical operation using said formula to the number assigned to the alphabetical letter, and generating the second order.

5 14. The method of claim 12 wherein the step of creating a second order of links further comprises providing an alphabetical letter at a beginning of the second order different than a letter beginning the first order.

791844

## ABSTRACT OF THE DISCLOSURE

10



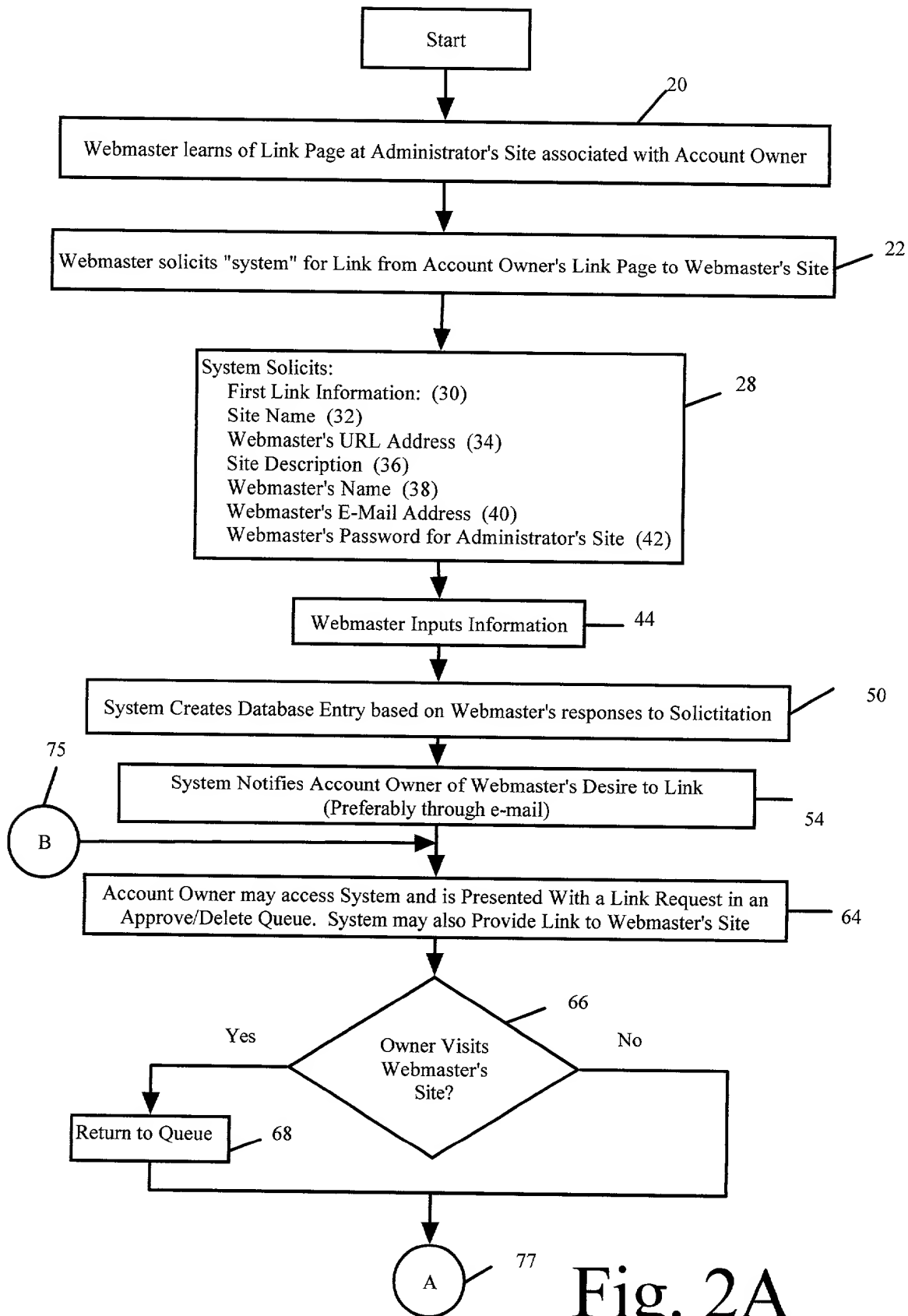


Fig. 2A

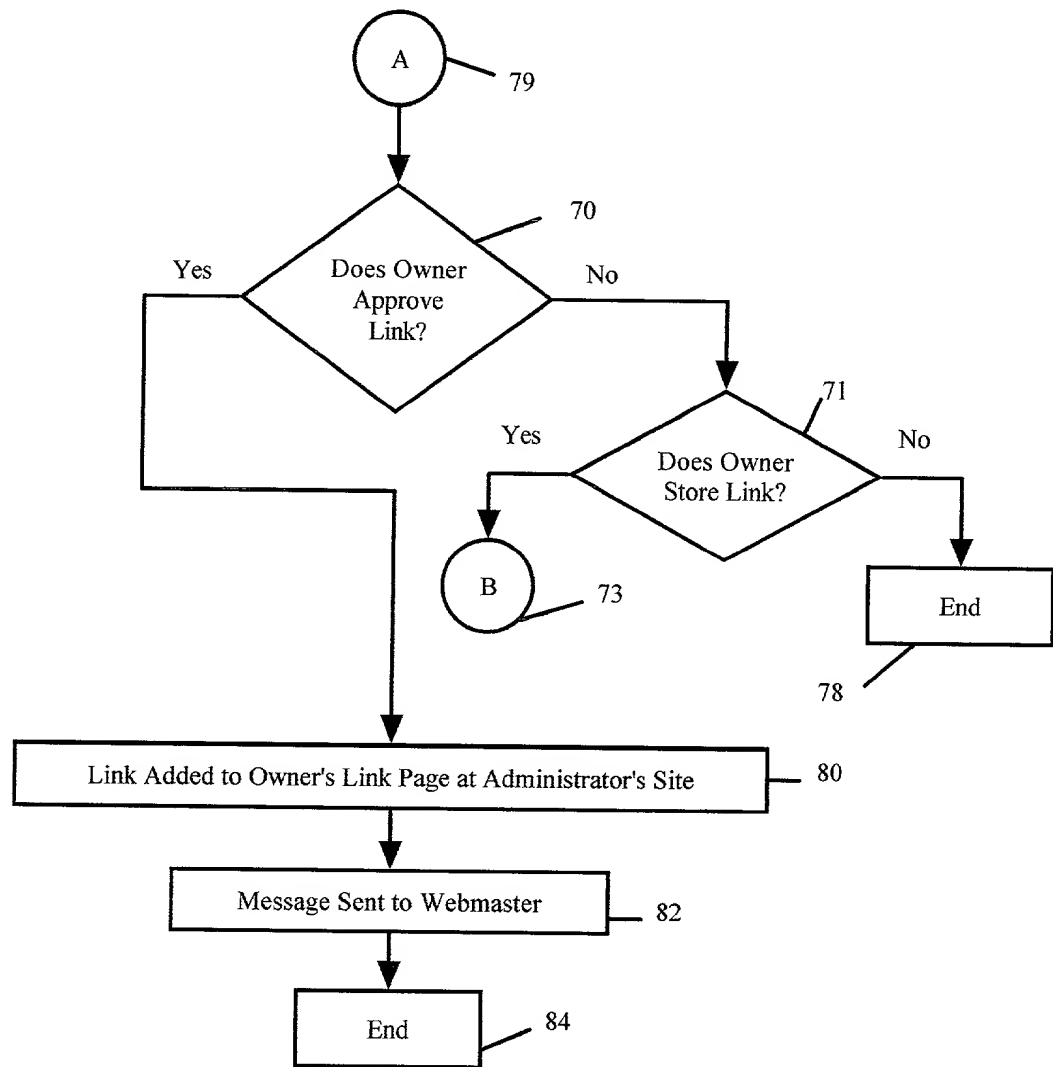


Fig. 2B

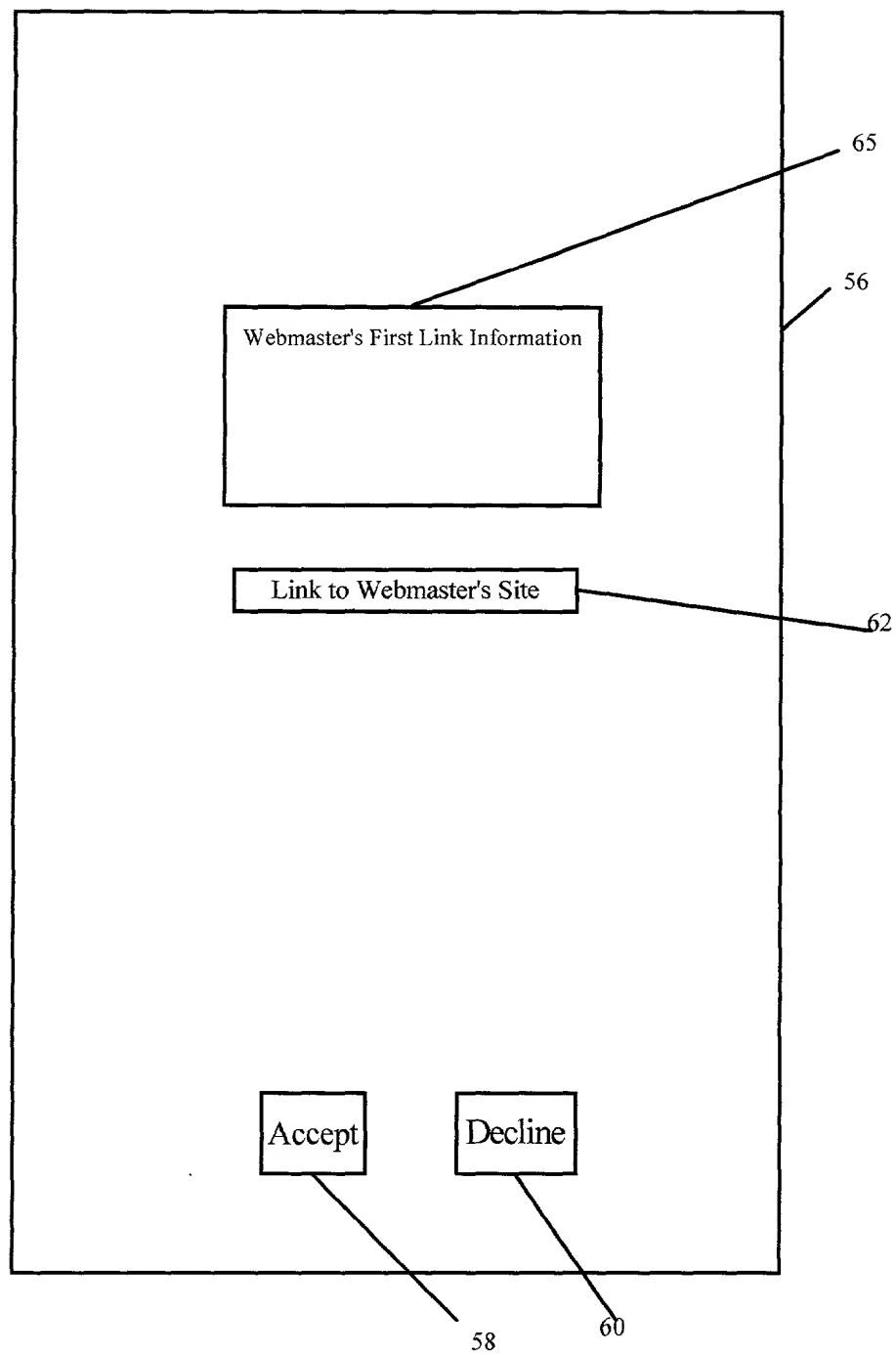


Fig. 3



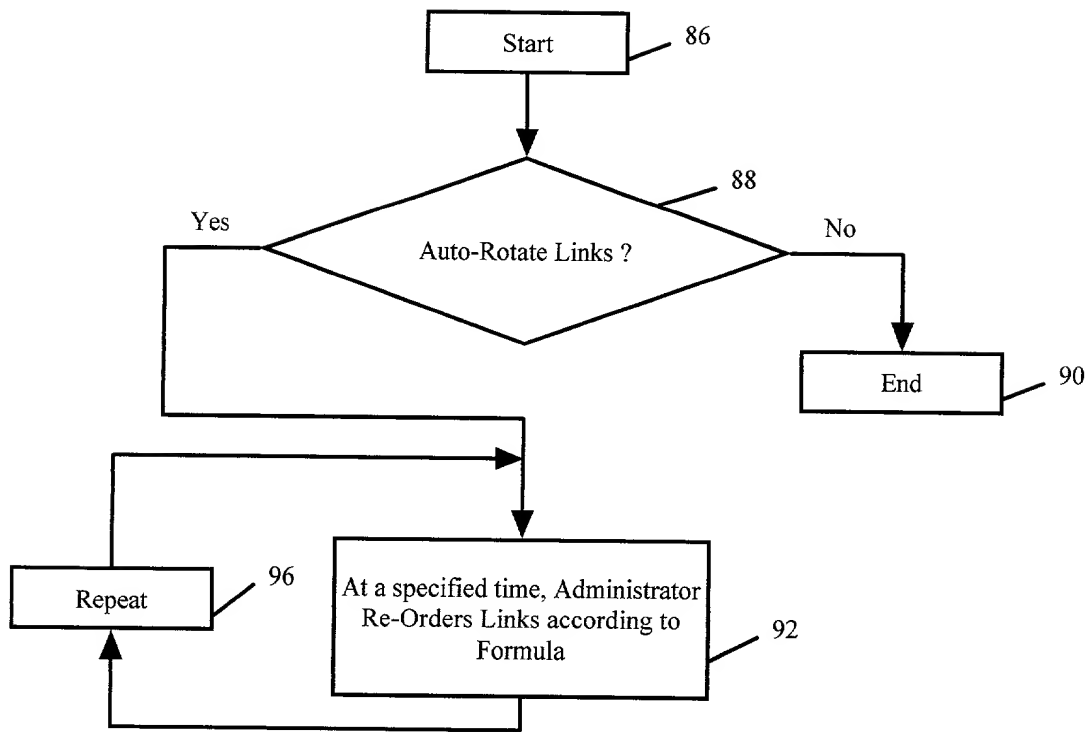


Fig. 4

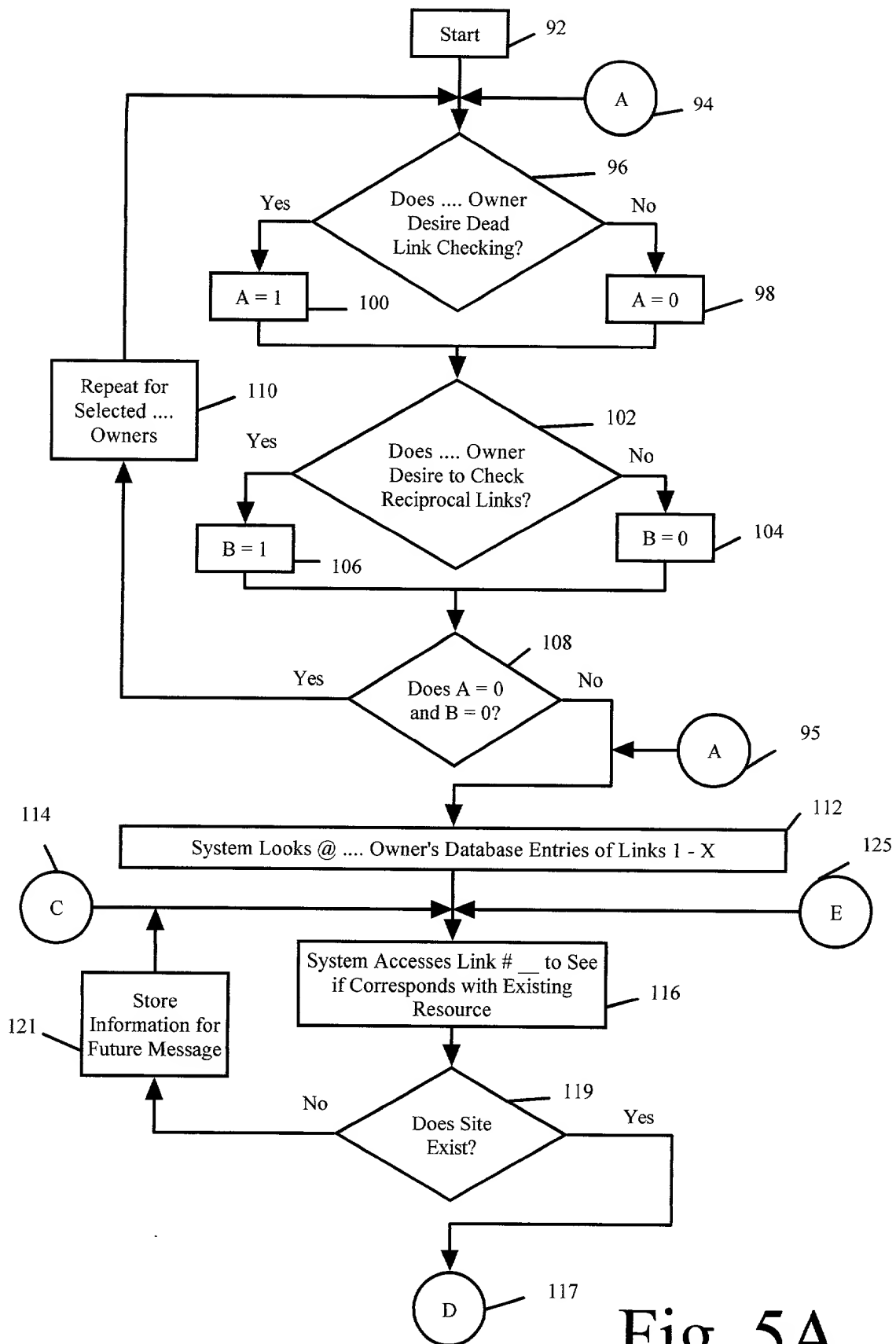


Fig. 5A

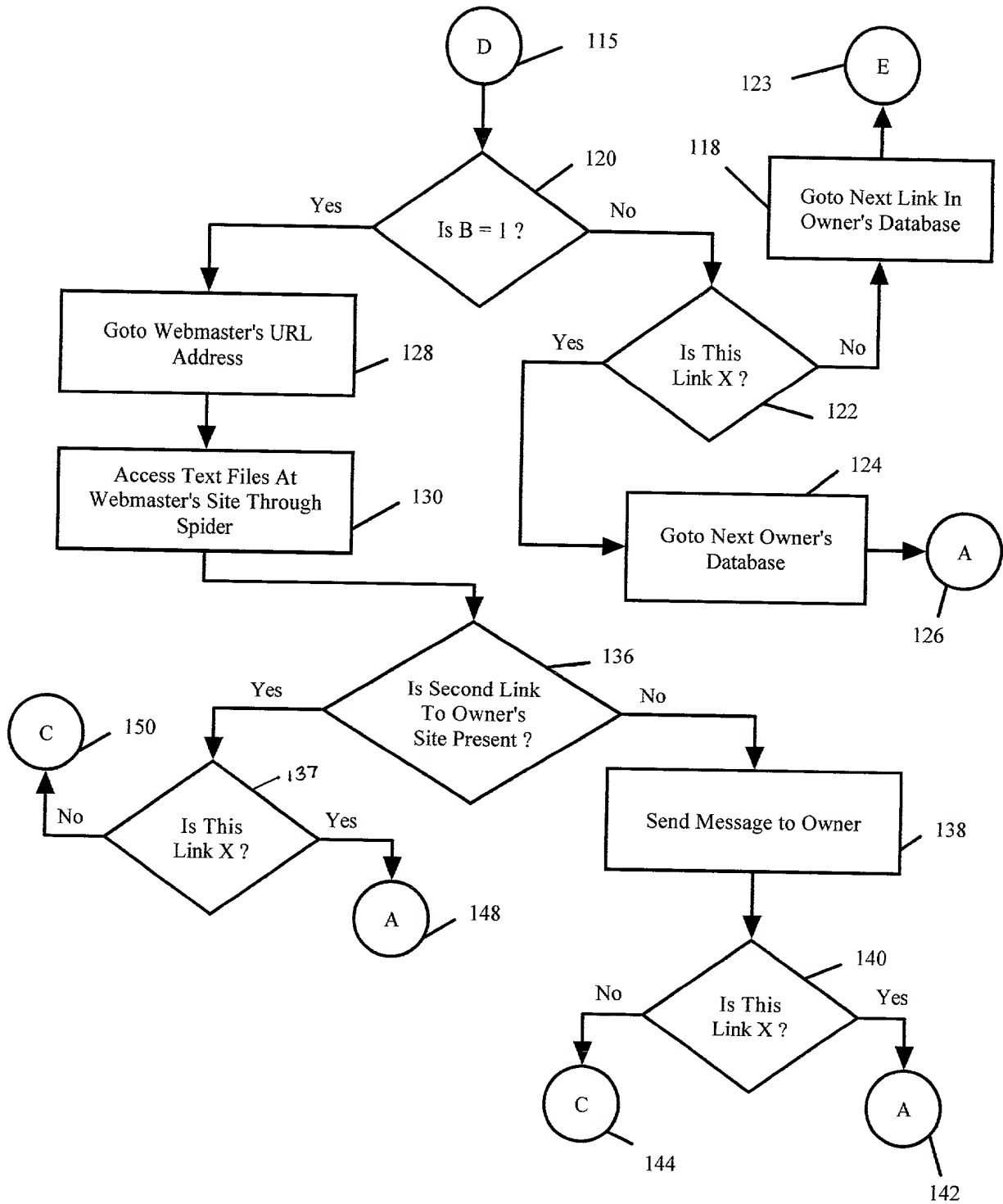


Fig. 5B

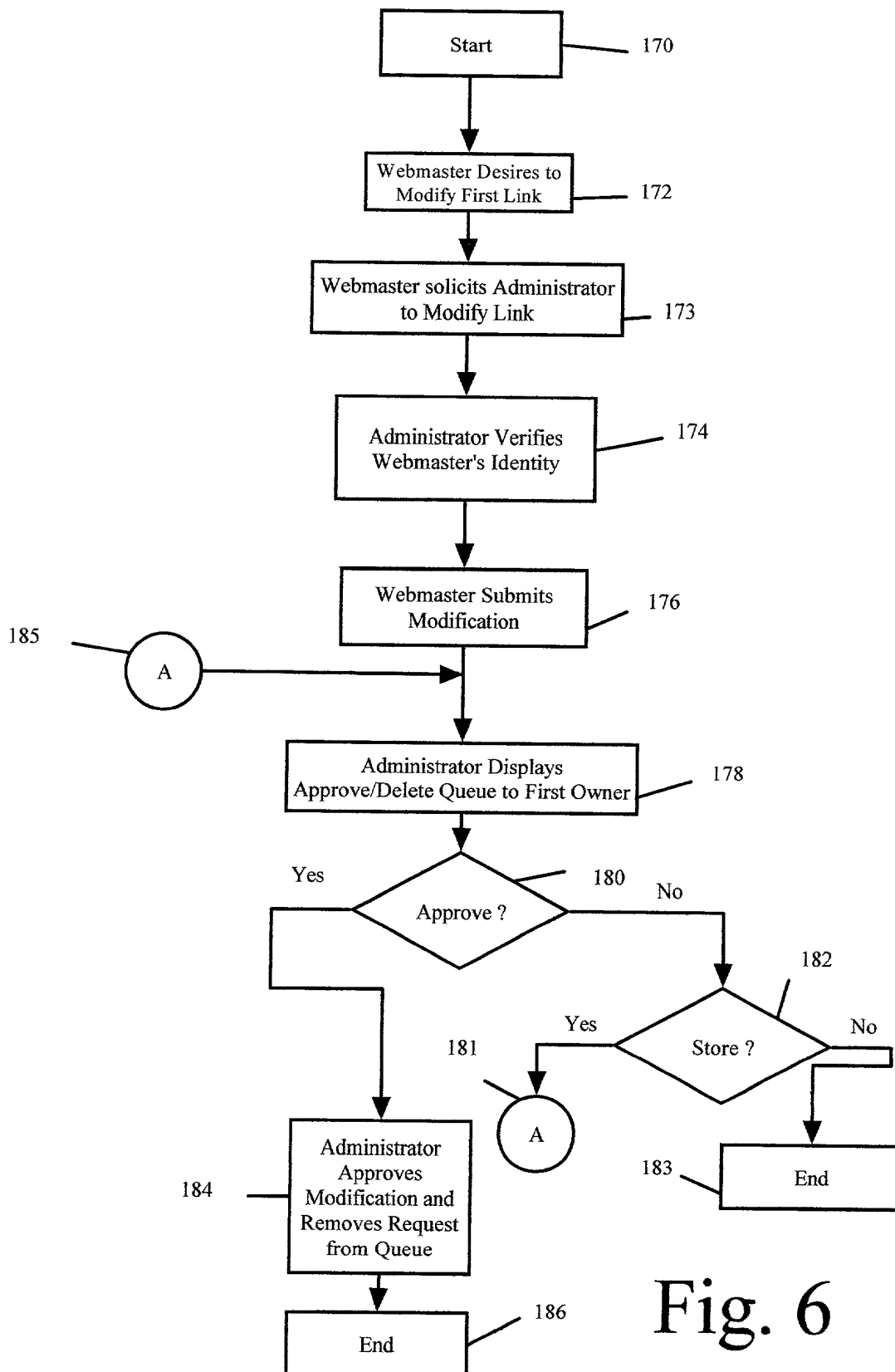


Fig. 6

Please type a plus sign (+) inside this box → ☐

PTO/SB/01 (12-97)

Approved for use through 9/30/00. OMB 0651-0032

Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION</b> <b>(37 CFR 1.63)</b>  <input checked="" type="checkbox"/> Declaration Submitted with Initial Filing      OR <input type="checkbox"/> Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)	<b>Attorney Docket Number</b>	04555/0100 30,211
	<b>First Named Inventor</b>	Lesser, Joel
	<b>COMPLETE IF KNOWN</b>	
	<b>Application Number</b>	/
	<b>Filing Date</b>	
	<b>Group Art Unit</b>	
	<b>Examiner Name</b>	

As a below named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

SEMI-AUTOMATED LINKING AND HOSTING METHOD

the specification of which (Title of the Invention)

☒ is attached hereto  
OR

☐ was filed on (MM/DD/YYYY) as United States Application Number or PCT International

Application Number and was amended on (MM/DD/YYYY) (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
None			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

I hereby claim the benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date (MM/DD/YYYY)	<input type="checkbox"/> Additional provisional application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.
None		

[Page 1 of 2]

Burden Hour Statement: This form is estimated to take 0.4 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → ☐

PTO/SB/01 (12-97)  
Approved for use through 9/30/00. OMB 0651-0032  
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

## DECLARATION — Utility or Design Patent Application

I hereby claim the benefit under 35 U.S.C. 120 of any United States application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application or PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (if applicable)
None		

☐ Additional U.S. or PCT international application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

As a named inventor, I hereby appoint the following registered practitioner(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

☐ Customer Number

OR

☒ Registered practitioner(s) name/registration number listed below

Place Customer  
Number Bar Code  
Label here


Name	Registration Number	Name	Registration Number
Alan Ruderman	25,369		
Douglas T. Johnson	31,841		
Stephen J. Stark	43,152		

☐ Additional registered practitioner(s) named on supplemental Registered Practitioner Information sheet PTO/SB/02C attached hereto.

Direct all correspondence to: ☐ Customer Number or Bar Code Label ☒ Correspondence address below

Name	Alan Ruderman				
Address	Miller & Martin LLP				
Address	Suite 1000 Volunteer Building; 832 Georgia Avenue				
City	Chattanooga	State	TN	ZIP	37402-2289
Country	USA	Telephone	(423) 756-6600	Fax	(423) 785-8480

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name of Sole or First Inventor:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any])		Family Name or Surname	
Joel		Lesser	
Inventor's Signature			Date
Residence: City	State	Country	Citizenship
Post Office Address	270 Westbury Lane		
Post Office Address			
City	Atlanta	State	Georgia
ZIP	30005-2518	Country	USA

☐ Additional inventors are being named on the \_\_\_\_\_ supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto

# APPENDIX A

Tag	Object	Found in Figure
10	Administrator	1
12	Account Owner	1
14	Webmaster	1
16	Link Page	
18		1
19		